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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,322

08/04/2003

Stephen Carter

020447

7855

23696

7590

06/28/2005

Qualcomm Incorporated
Patents Department
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EXAMINER

AFSHAR, KAMRAN

ART UNIT

PAPER NUMBER

2681

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/634,322</p>	<p>Applicant(s)</p> <p align="center">CARTER ET AL.</p>	
	<p>Examiner <i>1/10</i></p> <p align="center">Kamran Afshar, 571-272-7796</p>	<p>Art Unit</p> <p align="center">2681</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/29/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-45, 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 37, 46 and 57, the phrase "forming a record associating the position estimate for the subscriber station with either or both an event identifier and data measured or obtained responsive to the event" is not clear to define for a proper analysis. Appropriate correction is required.

Regarding claims 2-36, 38-45, 47-56, 58 are rejected as they are directly or indirectly depended from the independent rejected claims 1, 37, 46 and 57.

3. Claim 6 recites the limitation "the network event" in line 17 of claim 6. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 7 recites the limitation "the network event" in line 19 of claim 7. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 8 recites the limitation "the network event" in line 21 of claim 8. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 9 recites the limitation "the network event" in line 23 of claim 9. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 10 recites the limitation "the network event" in line 26 of claim 10. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 11 recites the limitation "the network event" in line 1 of claim 11. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 11-12 are rejected as they are directly or indirectly depended on the rejected claim 11.

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10. Claim 14 recites the limitation "the network event" in line 7 of claim 14. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 15 recites the limitation "the network event" in line 9 of claim 15. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 16 recites the limitation "the network event" in line 12 of claim 16. There is insufficient antecedent basis for this limitation in the claim.
13. Claim 17 recites the limitation "the network event" in line 14 of claim 17. There is insufficient antecedent basis for this limitation in the claim.
14. Claim 18 recites the limitation "the network event" in line 16 of claim 18. There is insufficient antecedent basis for this limitation in the claim.
15. Claim 19 recites the limitation "the network event" in line 18 of claim 19. There is insufficient antecedent basis for this limitation in the claim.
16. Claim 58 recites the limitation "base station" in line 10 of claim 58. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 1-6, 10-13, 21, 28-38, 46-47 & 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendrickson (U.S. Patent 6, 754,470 B2).

With respect to claim 1, Hendricksona discloses a method of obtaining data useful (See e.g. Co. 4, Lines 40-45) for one or more network applications (See e.g. circuit switch, CDMA, TDMA, iDEN, GSM, etc. Co. 7, Lines 34-44), the method comprising performing the following steps: obtaining a position

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estimate (See e.g. Co. 11, Lines 45-53) for a subscriber station (See e.g. Wireless device 100, of Fig. 1) responsive to a triggering event (See e.g. 240a of Fig. 2 A, RSSI, access failures, finger assignments, handoff, transmit and receive power, frame error rates, dropped calls, blocked calls, etc. Co. 15, Lines 38-42); forming a record associating the position estimate (See e.g. 235 of Fig. 2) for the subscriber station with either or both an event identifier and data measured or obtained responsive to the event; and storing (See e.g. 275 of Fig. 2) or transmitting (See e.g. Data Transfer from 110 to 120 of Fig. 2A) the record (See e.g. Co. 14, Lines 44-61, Co. 14, Line 66 – Co. 15, Lines 4, Fig. 9).

Regarding claim 2, Hendrickson discloses the subscriber station is operating within a wireless communications system (See e.g. 100 of Fig. 1, Co. 7, Lines 34-44).

Regarding claim 3, Hendrickson discloses the event is (See e.g. Frame error rates, Handoff activity, channel assignments, etc. Co. 17, Lines 40-50) observed by the subscriber station (See e.g. Network Performance Report, Device Performance Report, Co. 17, Line 40, 54).

Regarding claim 4, Hendrickson discloses the event is (See e.g. event data 240a) observed (See e.g. data analysis) by an entity in the system (See e.g. control center, server and or intermediate server) other than the subscriber station (See e.g. Co. 9, Lines 38-55).

Regarding claim 5, Hendrickson discloses the event is a network event (See e.g. 240a of Fig. 2 A, RSSI, access failures, finger assignments, handoff, transmit and receive power, frame error rates, dropped calls, blocked calls, etc. Co. 15, Lines 38-42).

Regarding claim 6, Hendrickson discloses the network event is an actual or near dropped call condition (See e.g. 240a of Fig. 2 A, RSSI, access failures, finger assignments, handoff, transmit and receive power, frame error rates, dropped calls, blocked calls, etc. Co. 15, Lines 38-42).

Regarding claim 10, Hendrickson discloses the network event is a failed handoff condition (See e.g. handoff activity, Co. 17, Line 50).

Regarding claim 11, Hendrickson discloses the network event is a handoff or near handoff condition (See e.g. handoff activity, Co. 17, Line 50).

Regarding claim 12, Hendrickson discloses the handoff condition is a hard or soft handoff condition (See e.g. handoff activity, Co. 17, Line 50).

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Regarding claim 13, Hendrickson discloses the near handoff condition is a hard or soft handoff condition (See e.g. handoff activity, Co. 17, Line 50).

Regarding claim 21, Hendrickson discloses the event is a user event (See e.g. Co. 10, Lines 1-2).

Regarding claims 28-29, Hendrickson discloses the position estimate is determined by the subscriber station (See e.g. Cell site location information, Cell site zip code, and or GPS fix, Co. 23, Lines 1-15).

Regarding claim 30, Hendrickson discloses the other entity is a position determination entity (See e.g. Cell site location information, Cell site zip code, and or GPS fix, Co. 23, Lines 1-15).

Regarding claim 31, Hendrickson discloses the record is stored locally at the subscriber station (See e.g. Co. 23, Line 61 – Co. 24, Line 2).

Regarding claim 32, Hendrickson discloses the record is transmitted and stored at a remote location in the system (See e.g. Co. 24, Lines 49-56).

Regarding claim 33, Hendrickson discloses the record is stored in a database holding like records obtained from other subscriber stations serviced by the system (See e.g. Co. 14, Lines 57 – Co. 15, Line 4).

Regarding claim 34, Hendrickson discloses a memory storing a sequence of software instructions embodying the method of claim 1 (See e.g. memory, data software gathering software, Co. 4, Lines 40-48).

Regarding claim 35, Hendrickson discloses system comprising a processor (See e.g. 200 of Fig. 2, Co. 10, Lines 42-53), and the memory and the processor is configured to access and execute the software instructions stored in the memory (See e.g. Co. 4, Line 65 – Co. 5, Line 6).

Regarding claim 36, Hendrickson discloses embodied by or incorporated within a subscriber station Co. 6, Lines 66-67).

With respect to claims 37, 46, Hendrickson discloses a method of obtaining data useful (See e.g. Co. 4, Lines 40-45) for one or more network applications (See e.g. circuit switch, CDMDA, TDAM, iDEN, GSM, etc. Co. 7, Lines 34-44), comprising: one or more network entities each configured to obtain or have obtained a position estimate (See e.g. Co. 11, Lines 45-53) for a subscriber station (See e.g.

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Wireless device 100, of Fig. 1) responsive to a triggering event (See e.g. 240a of Fig. 2 A, RSSI, access failures, finger assignments, handoff, transmit and receive power, frame error rates, dropped calls, blocked calls, etc. Co. 15, Lines 38-42), form or have formed a record associating (See e.g. 235 of Fig. 2) the position estimate for the subscriber station with either or both an identifier of the triggering event and data measured or obtained responsive to the triggering event, and store or having stored the record in a database (See e.g. Co. 14, Lines 44-61, Co. 14, Line 66 – Co. 15, Lines 4, Fig. 9).

With respect to claims 38, 47, Hendrickson discloses the one or more triggering events comprise a failed handoff condition (See e.g. handoff activity, Co. 17, Line 50).

With respect to claim 57, Hendrickson discloses a method of obtaining data useful (See e.g. Co. 4, Lines 40-45) for one or more network applications (See e.g. circuit switch, CDMA, TDMA, iDEN, GSM, etc. Co. 7, Lines 34-44) comprising performing the following steps: a step for forming records associating (See e.g. 220a, 230a of Fig. 2A), for each of a plurality of subscriber stations (See e.g. plurality Wireless device 100, of Fig. 1), a position estimate (See e.g. 250a of Fig. 2A, Co. 11, Lines 45-53) for the subscriber station obtained responsive to a triggering event (See e.g. 240a of Fig. 2 A, RSSI, access failures, finger assignments, handoff, transmit and receive power, frame error rates, dropped calls, blocked calls, etc. Co. 15, Lines 38-42) with either or both an identifier of the triggering event and data measured or obtained responsive to the event; a step for storing the records in a database (See e.g. 290A of Fig. 2A, Co. 14, Lines 44-61, Co. 14, Line 66 – Co. 15, Lines 4, Fig. 9); and a step for performing one or more network planning, optimization, validation or operations applications using data derived from the database (See e.g. Co. 3, Lines 16-18 & Lines 19-22).

Allowable Subject Matter

19. Claims 7-9, 14-20, 22-27, 39-45, 48-56 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

With respect to claims 7-9, the prior art of record fails to disclose or render obvious that the network event is the subscriber station entering, exiting, and the coverage area of the system; and further

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the network event is the expiration of a timer while the subscriber station is outside the coverage area of the system.

With respect to claims 14-20, the prior art of record fails to disclose or render obvious that the network event is a change in band condition; wherein the network event is passage of the subscriber station between the coverage areas of two wireless communications systems; wherein the network event is passage of the subscriber station between the coverage areas of a donor base station and a repeater.

With respect to claims 22-27, the prior art of record fails to disclose or render obvious that wherein the event is initiation of a 911 call; wherein the event is a request for position-dependent services in a Web-enabled subscriber station; wherein the record associates the position estimate with more measurements of pilot strength and phase; herein at least one of the pilots is associated with a traffic channel existing between the subscriber station and a base station; wherein the traffic channel is at least one of a forward traffic channel, and a reverse traffic channel.

With respect to claims 39-42, the prior art of record fails to disclose or render obvious that further comprising a memory holding data representing a map of failed handoff areas derived from the database, and for each area, association data associating the area with a plurality of base stations.

With respect to claims 43-45, 52-56, the prior art of record fails to disclose or render obvious that the triggering events comprises a subscriber station roaming into, out of, and within a coverage gap; and further comprising a memory holding data derived from the database comprising a map of coverage gaps and the memory holding data derived from the database and representing a gradient map.

With respect to claims 48-51, the prior art of record fails to disclose or render obvious that further comprising deriving data from the database comprising a map of failed handoff areas, and association data associating with each area a plurality of base stations.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Fordigh (U.S. patent 6,466,797 B1), which discloses Method And Arrangements Relating To A Radio Communication.

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b) Sheffield (U.S. Patent 6, 603,966 B1), which discloses Method And System For Optimizing Performance Of A Mobile Communication System.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Feild, Joseph** can be reached @ (571) 272-4090. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kamran Afshar


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

6/16/2005